

CPI _ Improving Program Learning Outcomes Report

CPI Improving PLO Report (AY22-23)

Name of the program BS Health Sciences/BS Health & Wellness

Dean' signature 

Expected Date of Submission 6/30/2023

Department Chair or Director: Mindy Haar

NYIT's CPI process is implemented to meet *MSCHE Standard V: Educational Effectiveness Assessment: Assessment of student learning and achievement demonstrates that the institution's students have accomplished educational goals consistent with their program of study, degree level, the institution's mission, and appropriate expectations for institutions of higher education.*

All degree program's PLO assessment plan (2022-2025) are posted through the link:

http://www.nyit.edu/planning/academic_assessment_plans_reports.

This is a report of its implementation for year 2022-2023. The report should address the following points:

I. The Annual Program Learning Outcomes (PLOs) Assessment should include the followings.

1. PLO (Program Learning Outcomes) assessed. list the PLOs that have been assessed in AY 22-23 based on your three-year plan(AY22_25)
2. METHOD: Describe the method of assessment and attach measurement instruments (e.g., rubric, exam items, scoring guide for a particular task, supervisor evaluation form, survey instrument, and other assessment tools).
3. ANALYSIS of the assessment results: provide criteria based disaggregate and aggregate data analysis.
4. INTERPRETATION: to what degree did students achieve the program learning outcomes based on your data analysis and

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expected learning outcomes?

5. CLOSE THE LOOP – If the expected program learning outcomes were successfully met, describe how the program will keep or expand the good practices, if not, refine or create the next cycle of [PDSA](#)

AY 2022-2023

Outcome 2 - Identify and apply the basic concepts of **biology**, chemistry, physics, and **math** as they apply to the health science

- Direct Measure: In HSCI 195: Professional and Cultural Issues in Healthcare, 80% of the students will achieve at least an 80 on the *Public Health Data* assignment. This will demonstrate that the student is able use proportions and rates to quantify morbidity and mortality and describe the frequency of diseases relative to the size of the population in which they occurred. Additionally, students will be able to create charts and graphs that clearly illustrate and compare disease incidence and prevalence among populations.

2022-2023: In HSCI 195, 100% of the student (n=17) earned grades above 80%. Full details of the assignment and rubric can be found in Appendix 1. Graphs, charts and infographics are the most effective means of visually summarizing and highlighting data. They can display patterns, trends, aberrations, similarities, and differences in the data that may not be evident in tables or text. As such, a graph can be an essential tool for analyzing and trying to make sense of data. In addition, a graph is often an effective way to present data to others less familiar with the data. Given the importance of reporting data accurately and effectively, this is a valuable assignment required by each cohort.

Outcome 4 - Formulate plans for maximizing wellness and prevention of chronic disease

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- Direct Measure: In NTSI 201: Introduction to Clinical Nutrition, 80% of the students will achieve at least an 80 on the *Pediatric Obesity* assignment. This will demonstrate that the student understands nutrient and disease pathophysiology and is able to recommend appropriate dietary changes, which will optimize health and prevent disease.

2022-2023: In NTSI 201, only 77% of the students earned grades above 80% (n=13) on this assignment. (Details can be found in Appendix 2). Nine students earned over 90%; 1 over 80%; 1 over 70% and 2 over 65%. The three students who did not do well on this assignment missed class frequently, including the lessons on how to calculate a meal plan which was a major part of the assignment. The instructor recorded a tutorial on how to do these calculations and posted it on Canvas enabling students to learn this skill. We will again monitor achievement for this learning outcome in the coming academic year.

- Indirect Measure: Our Exit survey of graduating students asks students their level of agreement on a 5 pt. scale if they perceive that they met each of the learning outcomes. Goal was that at least 85% of students should rate achievement of goal with a rating of at least a 3.

2022-2023: This year's response rate was 8 out of 22, an improvement of last year's 4 out of 20 but still not as well as we can potentially do. We switched this year to creating a RedCap survey within the department rather than Shifang Li facilitating a Qualtrics survey. While we had planned to set it up so that the student would need to send us confirmation that they participated in the survey before we send in the paperwork for STAR review for graduation, it could not be done that way since STAR review was done before the start of the student's final semester to make sure they had registered for all necessary course.

Results indicated that 100% of students rated achievement of the outcome with at least a 3. In 8 out of 9 learning outcomes, students rated achievement with a 4 or 5 For outcome 8, "Compose written and oral presentations, using correct professional

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terminology, in areas regarding the interaction of health with legal issues, economics, business and information systems,” 6 students rated achievement at 5 but 2 students were more neutral and rated achievement at a 3. This was surprising as written and oral presentations are required in many classes but it’s possible that the pandemic years that most affected the graduating class, impacted on oral presentations. As the required HSCI 195 Professional and Cultural Issues in Healthcare has become a speech-intensive course and that we have returned to pre-pandemic attendance on campus, the ratings for this outcome is expected to improve.

The Exit Survey also asked about preferred course format and 5 students preferred blended format while 3 preferred fully online formats. (None chose in-person classes that meets twice/week). Students commented that having online options was especially helpful in planning schedules that included internship hours and other commitments. Our department offers a choice of formats for many of our required courses.

In a question on the Senior Practicum students were unanimous that the Senior Practicum helped them confirm their career aspirations. As one student wrote: “ I was able to see my desired fields real close and personal and helped me decide which field resonated with me most”.

As for general comments, one student noted that they appreciated professors who were open to offering advice and feedback on coursework to improve the learning experience. Another noted that weekly assignments and research papers allowed for reinforcement and application of knowledge. One commented that Health Sciences was a great and informative major to have!

II. Brief Description of Faculty Engagement in the Current Annual Assessment Report:

Mindy Haar worked with full time faculty member Lorraine Mongiello to create 5-year plan. Both courses selected this year for PLO assessment are taught by Dr. Mongiello who provided the results. The results will be shared with all other

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department faculty. The department's faculty handbook is updated on a continuous basis so lessons learned and best practices developed can be incorporated.

Last updated 4/14/23

Appendix 1: Health Disparities Assignment

HSCI 195

Professor Mongiello

Health Disparities

Patients' beliefs, behaviors, and values are shaped by factors such as ethnicity, gender, language, mental ability, nationality, occupation, race, religion, sexual orientation, and socioeconomic status. Cultural competence is the provider and systems able to understand and integrate cultural intelligence into the delivery of healthcare. The goal of providing culturally competent health care services is to provide consistent quality of care to every patient, regardless of their cultural, ethnic, racial, or religious background.

Even though medical advances and new technologies have provided Americans with the potential for longer and healthier lives, persistent and well-documented health disparities affecting racial and ethnic minority populations persist.

A health disparity is a particular type of health difference that is closely linked with social or economic disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater social and/or economic obstacles to health and/or a clean environment based on their racial or ethnic group; religion; socio-economic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation; geographic location; or other characteristics historically linked to discrimination or exclusion.

Racial and ethnic minorities still lag in many health outcome measures. They are less likely to get the preventive care they need to stay healthy, more likely to suffer from serious illnesses, such as diabetes and heart disease. When they do get sick, they are less likely to have access to quality health care. Other underserved communities have equally pressing and often unrecognized challenges to health.

Many of the underlying risk factors that contribute to health disparities are the result of where we live, learn, work and play. These factors, commonly called "social determinants of health," interact to impact health and contribute to health disparities.

Eliminating health disparities will necessitate behavioral, environmental and social-level approaches to address issues such as insufficient education, inadequate housing, exposure to violence, and limited opportunities to earn a livable wage. Disparity resources for this assignment can be found under handouts.

Examples of Types of Disparities

- incidence (new cases)
- prevalence (all existing cases)
- mortality (deaths)

- morbidity (disease-related health complications)
- quality of life after/during treatment
- screening rates
- stage at diagnosis
- genomics

Presenting Disparity Data

Graphs, charts and infographics are the most effective means of visually summarizing and highlighting data. They can display patterns, trends, aberrations, similarities, and differences in the data that may not be evident in tables or text. As such, a graph can be an essential tool for analyzing and trying to make sense of data. In addition, a graph is often an effective way to present data to others less familiar with the data.

Graphs have been used to report scientific data for centuries; however, creating effective graphs can prove challenging. Given the importance of reporting data accurately and effectively, it is worth your time to learn how to do so. This is the objective of this assignment.

When designing graphs, some best practices for graphics include:

- Ensure that a graphic can stand alone by clear labeling of title, source, axes, scales, and legends.
- Clearly identify variables portrayed (legends or keys), including units of measure.
- Minimize number of lines on a graph.
- Generally, portray frequency on the vertical scale, starting at zero, and the classification variable on horizontal scale.
- Ensure that scales for each axis are appropriate for data presented.
- Define any abbreviations or symbols.
- Specify any data excluded.
- Provide source of data.

For guidance on how to make graphs go to:

<https://www.cdc.gov/csels/dsepd/ss1978/lesson4/section3.html> and consult the material in the Charts and Graphs module on Canvas.

Group Assignment

Each group will be assigned a health condition and a specific population to research. You will find your topic and group posted on *Canvas*.

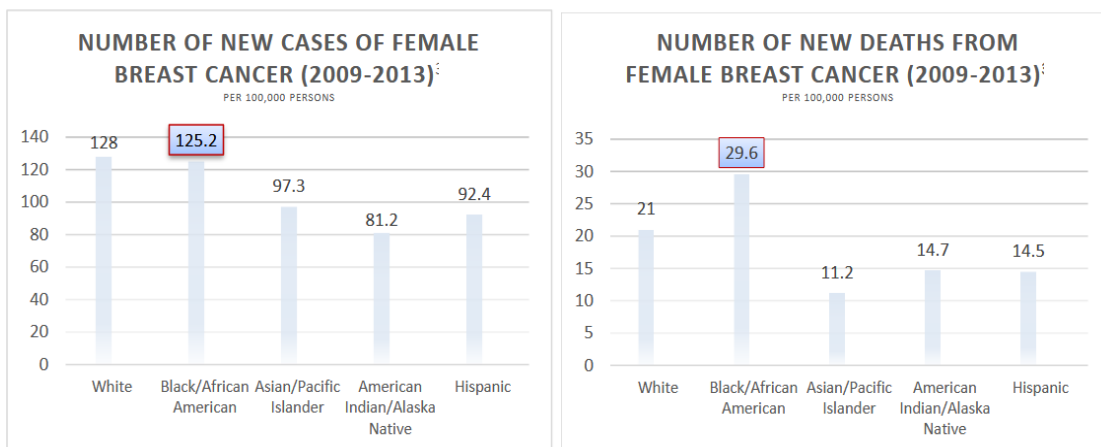
As a group, create **15-16** slides (not including title and reference slides) that “tells the story” of the disparity you were asked to research. The slides to be included are listed below. The group will present their slides to the class and hand in the presentation with note pages. The notes should contain an outline of the key points you will make for each slide (sample note page on second to last page). **All graphs, charts and infographics must be original work and the presentation must be cohesive.**

All group members should be familiar with each slide because the instructor will determine the order the group members present.

Your presentation must contain:

1. A title slide which includes the names of each group member.
2. A text slide that describes the condition.
3. An incidence and/or prevalence graph that shows a disparity between two or more groups.
4. A graph(s) that shows change in prevalence or incidence or mortality over time.
5. Consequence of the condition that shows a disparity between two or more groups.
6. Text, tables and/or graphs that explain reasons for the disparities. (Indicates what puts one group at higher risk than other groups.)
7. Describe a public health population-based program or intervention that reaches the group that you identified to be at risk for the condition or one of the risk factors for the condition.
8. A chart or graft that displays the outcome data from the intervention you discussed in number seven. (example on last page)
9. Group's choice: create three slides that adds to the story of your condition, disparity and/or intervention.
10. References slide.

NOTE: At least six original graphs and one table are required. One slide should have two graphs on it to make a comparisons between two different variables. The following example shows a consequence (death) of the condition (breast cancer).



* Incidence and mortality rates in the US lag 2-4 years behind the current year due to the time required for data collection, quality control, and dissemination.

Source: American Cancer Society. Cancer Facts & Figures for African Americans 2016-2018.

Note: These two charts work very well together, the first one indicates that more whites than blacks are diagnosed with breast cancer; however, the second one tell us that

blacks are more likely to die from the disease. This is an example of a disparity. In your presentation (and on the notes page) you would state why this disparity exists.

Topics

Asthma: Health disparities exist among persons with asthma, resulting in higher morbidity and mortality rates among minority groups. Children have consistently higher rates of asthma than adults. Among children, asthma disproportionately affects non-Hispanic black children, compared with white children. There are also geographic disparities.

- Compare asthma disparities between the South Bronx and the Upper East Side of Manhattan.

Breast Cancer: Incidence rates are higher among blacks than whites for women under age 45. It is rarely diagnosed in women younger than 25 years of age. The median age of diagnosis for black women is 58 years and 62 years for white women.

- Compare breast cancer racial disparities.

HIV/AIDS: Despite overall improvements in health over time, many health disparities persist. This is true with many human immunodeficiency virus (HIV)-related outcomes. For instance, the magnitude of the African American–white disparity in acquired immunodeficiency syndrome (AIDS) diagnoses and mortality has actually grown substantially over time.

- Compare HIV/AIDS white/black disparities.

HTN/Stroke: Data from the Centers for Disease Control (CDC) dating back at least 40 years indicate that individuals who are from the stroke belt are at least twice as likely to experience a stroke throughout their lifetimes as people of the same age who are not from the stroke belt. The states that have the highest rate of stroke in the United States are all geographically located in the southern region of the US. They are (in alphabetical order): Alabama, Arkansas, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. Interestingly, people who grew up in the stroke belt and moved to another state located outside of the stroke belt after childhood continue to be more likely to experience a stroke in adulthood than their age-matched peers.

- Explain the stroke disparity between the southeast and northeast in the United States.

Infant Mortality Rate (IMR): is regarded as an important indicator of population health. Worldwide, IMR rates vary substantially with the highest found in sub-Saharan Africa compared to the lowest in Europe. Identifying disparities in IMR and quantifying

attributable risk factors is essential for policymakers and health care providers when tailoring time-appropriate interventions at a global, regional, and country level.

- Compare the IMRs of The United States, Japan, China and Mexico.

Infant Feeding: The benefits of breastfeeding are undisputed and numerous. For example, breast milk protects babies against allergies and eczema; causes less stomach upset, diarrhea, and constipation than formula; and, it reduces the risk of viruses, urinary tract infections, inflammatory bowel disease, gastroenteritis, ear infections, and respiratory infections and lessens the risk of SIDS. Also, mothers who breastfeed recover from childbirth more quickly and easily.

- Compare income disparities between breastfed and formula fed infants.

Suicide: Understanding differences in rates of suicidal ideation, suicide attempts, and suicide deaths in different groups is essential for more effectively preventing suicide. In 2017, the suicide rate for Veterans was 1.5 times the rate for their non-Veteran counterparts.

- Present the disparities between veterans and the general population in the United States.

Addiction: With opioid-related deaths reaching epidemic levels, gaining a better understanding of access to treatment for opioid use disorder (OUD) is critical. Thirty-five times more white patients than patients of color receive buprenorphine, and three-quarters of prescriptions go to those who pay cash or have private insurance.

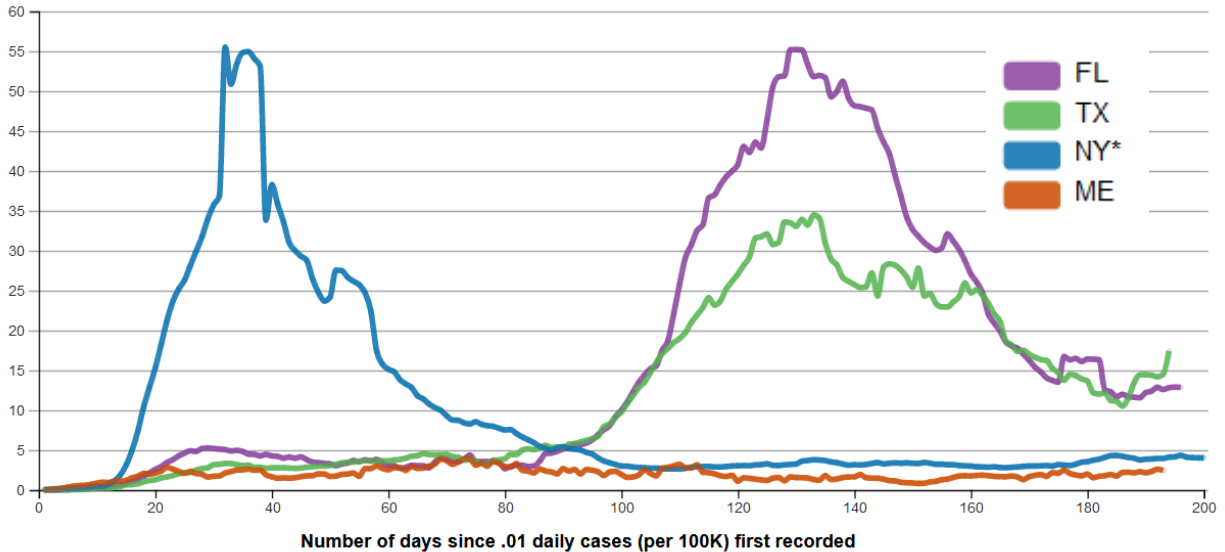
- Compare racial or income disparities of OUD.

CVD: Recognized as one of the fastest growing immigrant groups in the United States, the South Asian population is disproportionately affected by several cardiovascular disease (CVD) risk factors. These factors include a high incidence of obesity, high blood pressure, high cholesterol, and diabetes.

- Compare CVD rates and risk factors between South Asians and other groups in the United States.

Sample Note Page – A detailed note page must be submitted for each slide with key talking points outlined.

New confirmed cases of Covid-19, reported to CDC as of September 20, 2020



Florida (FL), Texas (TX), New York (NY), and Maine (ME)

Seven-day rolling average of new cases (per 100K)

Source: Centers for Disease Control and Prevention (CDC) September 22, 2020

Seven-day rolling average of new cases (per 100K), by number of days since .01 average daily cases (per 100K) first recorded; from January 21, 2020 to September 22, 2020.

Florida was one of the fastest states to lift restrictions on its economy, and was eager to do so since the state largely avoided the dire impact the spring coronavirus surge brought to areas like New York.

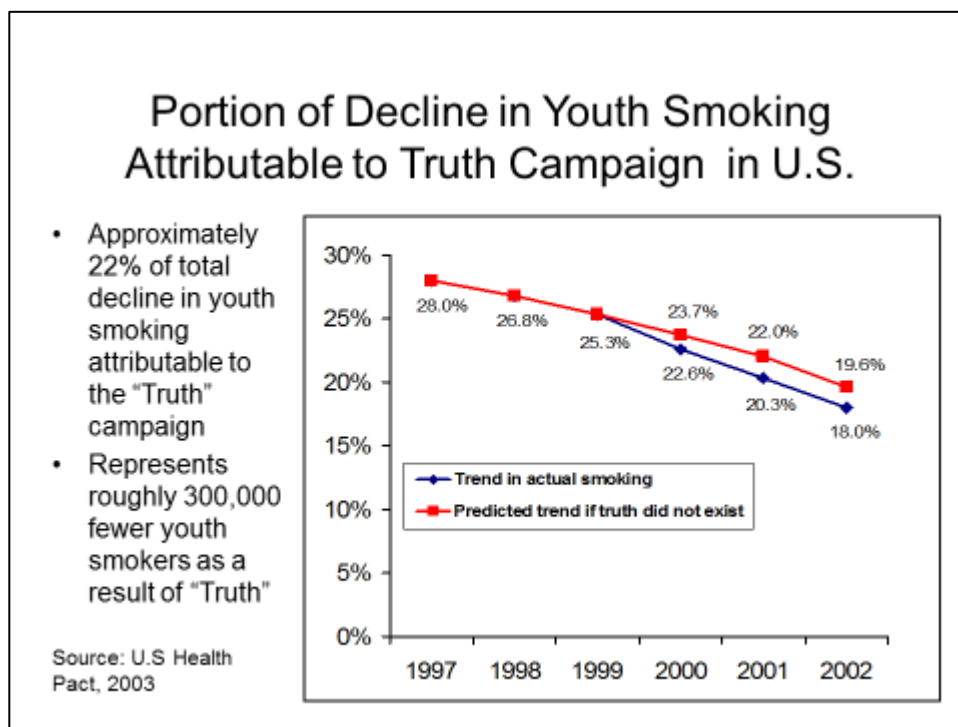
- Around Memorial Day, when large crowds packed popular vacation spots, the state was only reporting about 500 new cases a day.
- By mid-July, the state was regularly reporting over 10,000 new cases a day. A rise in hospitalizations followed and then, a spike in deaths.
- The southern part of the state has been the hardest-hit, including the city of Miami.

Maine CDC director Dr. Shah said. “The bottom line is that the reason Maine has done well is because, not despite, but because Maine people have adhered to and listened to the science.”

- Maine’s Governor required Massachusetts and Rhode Island residents to quarantine for two weeks or get a negative COVID test before coming to Maine.
- The state has an older population with many over the age of 60 and more vulnerable to the virus. That may have played a role in the compliance as well as a very targeted education campaign from the state.
- Maine is not particularly population dense and that played a significant role in helping to prevent any early significant surge in cases.

New York... Texas...

The slide below is an example of outcome data for an intervention.



(Revised 09-25-22)

Oral Group Presentation Grading Rubric

Topic:

Required Components	Required Components	Yes	No
1. Title Slide	included the names and picture of each group member		
	Introductions were made		
	interesting and descriptive title		
2. Disease/Condition	provided a clear and concise description of condition		
	included current treatments		
3. Rates of Disease & Disparities	current incidence and/or prevalence presented		
	groups were compared		
4. Change	change in prevalence/incidence/mortality clearly presented		
5. Outcomes (Such as death, illness, disability.)	showed a disparity between two or more groups		
6. Reasons for Disparities	indicated factors that put group at higher risk		
7. Intervention/Policy	described a population intervention that targeted the:		
	• disease/condition or risk factor		
	• target population		
	included:		
	• who created & provided the intervention/policy		
	• what exactly was done & how		
	• when did this happen		
8. Outcome Data	reported (data) if the intervention was successful or not		
9. Content (Be sure to include all required items.)	15-16 slides (not including title/references)		
	at least 6 original charts/graphs and one table		
	one slide with two charts/graphs		
	information was properly cited		
	information was properly referenced		
	quality and quantity of references were appropriate		
	technical terms were defined & appropriate for the audience		
	presentation contained accurate information		
	material included was relevant to the overall message		
	presentation was cohesive		
	presenters were professional		
	readable slides free from grammatical and spelling errors		
	information was not repeated or contradicted		
an obvious conclusion summarizing the presentation			
10. Note Pages	detailed outline provided for each slide		

4. Calculate the percent of kcalories that Jamey consumed from each macronutrient (CHO, protein, fat) from Jamey's 24-hour recall. Complete table and then show work. (6)

	Number	Kcalories	CHO	Protein	Fat
Starch					
Fruit					
Vegetable					
Milk (whole)	3.5	560	42	28	28
Protein (lean)					
Protein (med)					
Protein (high)					
Fat					
Sweets					
Total					

5. Calculate the percent of kcalories provided by beverages in Jamey's 24-hour recall. Show work. (3)
6. What is your weight goal for Jamey over the next six months? Be sure to consider her medical history, co-morbidities, age and quality of life. Briefly state how you came up with your goal. (4)
7. Set a calorie goal for Jamey. Be sure to consider Jamey's current diet and her activity level. Briefly state how you came up with your recommendation. (3)
8. Two dietary factors associated with increased risk of overweight are increased dietary fat intake and increased calorie-dense beverages. List 10 foods from Jamey's diet recall that fit these criteria. (5)
9. Calculate a diet prescription using the *Choose Your Foods Lists* booklet. Enter your results on the table below. Be sure your pattern is based on the kcalorie goal you set in question 7. (15)
10. Create a two-day sample menu for Jamey from the dietary prescription you calculated in question seven. Use the meal plan template at the end of this document. Keep in mind the foods she likes, her age and the changes that she will need to make to improve her health. The meals should be realistic and appealing to Jamey. (16)
11. Now enter and assess the menus you planned for Jamey using *Diet & WellnessPlus+*. Follow these steps:
- Create a profile for Jamey using her information including the kcalorie goal you set for her.
 - Enter all foods and correct portion size from your menus. Enter them as two separate dates.
 - Then click on 1) reports and 2) combination reports (be sure both menus are included on one report).
 - Include in your combination report: *Intake vs Goals and Daily Food Log*. Submit combination report. (5)
13. How did you do? Does your menu meet your calorie goal Dietary Guidelines and DRIs for Jamey? If not, what foods can you add or take away to meet her goals? (12)

14. You talk with Jamey and her parents, who are friendly and cooperative. Jamey’s mother asks if she should allow Jamey to have snack between meals, if it is okay if the rest of the family eat differently from Jamey sometimes and if she should reward her with dessert when she exercises. How would you respond to these questions? (6)

15. Create an exercise plan (what should she do and at what pace should she increase activity) for Jamey. Set a short term (2 weeks) and long-term (1 year) exercise goal (basically, what she should do, how often and for what duration). Be sure the goals are specific, measurable and realistic. **Remember she is 10 years old**. For example: Short-term goal - *increase activity over the next two weeks* is too vague and not specific or measurable. Long-term goal - *in one-year patient will jog six times a week for two hours*; this is specific and measurable but not realistic for a child. (8)

Diet Prescription

Food List	Choices	Calories	CHO g	Protein g	Fat g
Starch					
Milk _____					
Fruits					
Nonstarchy Veggie					
Protein: Lean					
Medium-Fat					
High-Fat					
Plant-Based					
Fats					
	Total				
		% KCAL			

Meal Pattern	Sample Menu 1	Sample Menu 2
Breakfast <input type="checkbox"/> Starch <input type="checkbox"/> Milk <input type="checkbox"/> Fruit <input type="checkbox"/> Non Starchy Vegetable <input type="checkbox"/> Protein Type _____ <input type="checkbox"/> Fat		
Snack		
Lunch <input type="checkbox"/> Starch <input type="checkbox"/> Milk _____ <input type="checkbox"/> Fruit <input type="checkbox"/> Non Starchy Vegetable <input type="checkbox"/> Protein Type _____ <input type="checkbox"/> Fat		
Snack		
Dinner <input type="checkbox"/> Starch <input type="checkbox"/> Milk _____ <input type="checkbox"/> Fruit <input type="checkbox"/> Non Starchy Vegetable <input type="checkbox"/> Protein Type _____ <input type="checkbox"/> Fat		
Snack		